In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A thin film magnetic head comprising:

an ~~insulating~~ gap layer provided between cores made of a magnetic material; and

a coil for inducing a recording magnetic field in the cores,

wherein the cores have a facing surface,

wherein the gap layer comprises a SiON film, and

~~wherein~~ the amount of protrusion of the ~~insulating~~ gap layer from the facing surface is less than or equal to about 3.5 nm, and a distance between the facing surface and a magnetic medium is between about 10 nm and about 3.5 nm.

~~wherein the gap layer comprises a SiON film~~.

2. (Original) A thin film magnetic head according to Claim 1, wherein the Young's modulus E of the gap layer is $E > 123.2$ (GPa).

3. (Currently amended) A thin film magnetic head according to Claim 1[~~2~~], wherein the atomic ratio of N of the SiON film is 0 (at%) < N atomic % ≤ 6 (at%).

4. (Currently amended) A thin film magnetic head according to Claim 1[~~2~~], wherein the Young's modulus E of the gap layer is $E \geq 127.4$ (GPa).

5. (Original) A thin film magnetic head according to Claim 4, wherein the atomic ratio of N of the SiON film is 1 (at%) ≤ N atomic % ≤ 6 (at%).

6. (Withdrawn) A thin film magnetic head comprising:

an insulating gap layer between cores made of a magnetic material; and

a coil for inducing a recording magnetic field in the cores,

wherein the gap layer comprises a SiO_2 film, and

wherein the Young's modulus E of the gap layer is $E > 123.2$ (GPa).

7. (Withdrawn) A thin film magnetic head according to Claim 6, wherein the Young's modulus E of the gap layer is $E \geq 127.4$ (GPa).

8. (Previously presented) A thin film magnetic head comprising:

a magnetoresistive element capable of detecting a recording signal due to a change in electric resistance with an external magnetic field; and

shield layers formed above and below the magnetoresistive element with gap layers provided therebetween,

wherein the cores have a facing surface,

wherein the amount of protrusion of at least one of the gap layers from the facing surface is less than or equal to about 3.5 nm, and

wherein at least one of the gap layers comprises a SiON film.

9. (Previously presented) A thin film magnetic head according to Claim 8, wherein the Young's modulus E of at least one of the gap layers is $E > 123.2$ (GPa).

10. (Currently amended) A thin film magnetic head according to Claim 8[~~9~~], wherein the atomic ratio of N of the SiON film is 0 (at%) < N atomic % ≤ 6 (at%).

11. (Currently amended) A thin film magnetic head according to Claim 8[~~9~~], wherein the Young's modulus E of the gap layers is E ≥ 127.4 (GPa).

12. (Original) A thin film magnetic head according to Claim 11, wherein the atomic ratio of N of the SiON film is 1 (at%) ≤ N atomic % ≤ 6 (at%).

13. (Withdrawn) A thin film magnetic head comprising:

a magnetoresistive element capable of detecting a recording signal due to a change in electric resistance with an external magnetic field; and

shield layers formed above and below the magnetoresistive element with gap layers provided therebetween,

wherein at least one of the gap layers comprises a SiO_2 film, and

wherein the Young's modulus E of at least one of the gap layers is E > 123.2 (GPa).

14. (Withdrawn) A thin film magnetic head according to Claim 13, wherein the Young's modulus E of at least one of the gap layers is E ≥ 127.4 (GPa).

15. (Withdrawn) A method of manufacturing a thin film magnetic head comprising:

arranging a target and a substrate opposite to the target in a deposition apparatus; and

forming a gap layer of the thin film magnetic head,

wherein in forming the gap layer, a target composed of SiO_2 is prepared, and then sputtered with N_2 gas used as a sputtering gas flowing into the apparatus to form the gap layer comprising a SiON film.

16. (Withdrawn) A method of manufacturing a thin film magnetic head according to Claim 15, wherein the flow rate ratio of the N_2 gas in the sputtering gas is 0% < flow rate ratio of N_2 gas $\leq$ 30%.

17. (Withdrawn) A method of manufacturing a thin film magnetic head according to Claim 16, wherein the flow rate ratio of the N_2 gas is preferably in the range of 5% $\leq$ flow rate ratio of N_2 gas $\leq$ 30%.

18. (Withdrawn) A method of manufacturing a thin film magnetic head according to Claim 15, wherein forming the gap layer, comprises supplying a bias electric power to the substrate side.

19. (Withdrawn) A method of manufacturing a thin film magnetic head comprising:

arranging a target and a substrate opposite to the target in a deposition apparatus; and

forming a gap layer of the thin film magnetic head,

wherein in forming the gap layer, the target composed of SiO_2 is prepared and then sputtered with the bias electric power supplied to the

substrate to form the gap layer comprising a SiO_2 film having a Young's modulus E of E> 123.2 (GPa).

20. (Withdrawn) A method of manufacturing a thin film magnetic head according to Claim 19, wherein the bias electric power is equal to or greater than 10 W.

21. Cancelled.

22. (Previously presented) A thin film magnetic head according to claim 1, wherein the amount of protrusion at least one of the gap layers from the facing surface is less than or equal to about 3 nm.

23. (New) A thin film magnetic head comprising:

a gap layer provided between cores made of a magnetic material; and

a coil for inducing a recording magnetic field in the cores,

wherein the gap layer contains at least silicon and oxygen and has a Young's modulus being at least about five percent greater than that of a Ta_2O_5 film.

24. (New) The thin film magnetic head according to Claim 23, wherein the cores have a facing surface, and an amount of protrusion of the gap layer from the facing surface is at most about 3.5 nm.

25. (New) The thin film magnetic head according to Claim 23 wherein the Young's modulus is at least about 10 percent greater than that of a Ta_2O_5 film.

26. (New) The thin film magnetic head according to Claim 25, wherein the cores have a facing surface, and an amount of protrusion of the gap layer from the facing surface is at most about 3.0 nm.

27. (New) A thin film magnetic head comprising:

a magnetoresistive element capable of detecting a recording signal due to a change in electric resistance with an external magnetic field; and

shield layers formed above and below the magnetoresistive element with gap layers provided therebetween,

wherein the gap layers contain at least silicon and oxygen and have a Young's modulus being at least about five percent greater than that of a Ta_2O_5 film.

28. (New) The thin film magnetic head according to Claim 27 wherein the cores have a facing surface, and an amount of protrusion of the gap layer from the facing surface is at most about 3.5 nm.

29. (New) A thin film magnetic head comprising:

a gap layer provided between cores made of a magnetic material; and

a coil for inducing a recording magnetic field in the cores,

wherein the gap layer comprises a SiON film, the atomic ratio of N of the SiON film being 0 (at%) < N atomic % ≤ 6 (at%).

30. (New) A thin film magnetic head according to Claim 29, wherein the Young's modulus E of the gap layer is $E \geq 123.2$ (GPa).

31. (New) A thin film magnetic head comprising:

a gap layer provided between cores made of a magnetic material, said cores having a facing surface; and

a coil for inducing a recording magnetic field in the cores,

wherein the gap layer comprises a SiON film, the Young's modulus of said SiON film being high enough such that an amount of protrusion of the gap layer from the facing surface is at most about 3.5 nm.

32. (New) The thin film magnetic head according to Claim 31, wherein the Young's modulus of the SiON film is at least about five percent greater than that of a Ta_2O_5 film.

33. (New) The thin film magnetic head according to Claim 1, wherein the Young's modulus of the SiON film is at least about five percent greater than that of a Ta_2O_5 film.

34. (New) The thin film magnetic head according to Claim 1, wherein the Young's modulus of the SiON film is at least about ten percent greater than that of a Ta_2O_5 film.